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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,746	01/08/2002	Robert P. Gilmore	MOBI-015/00US 301375-2035	6494
45209	7590	02/08/2005	EXAMINER	
INTEL/BLAKELY 12400 WILSHIRE BOULEVARD, SEVENTH FLOOR LOS ANGELES, CA 90025-1030			NGUYEN, QUYNH H	
			ART UNIT	PAPER NUMBER
			2642	

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/043,746	GILMORE, ROBERT P.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Quynh H Nguyen	2642	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 January 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-40 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/8/02 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/14/02</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This application is in condition for allowance except for the following formal matters:

#### ***Claim Objections***

2. Claims 1, 11, 16, and 22 are objected to because of the following informalities: N and M cited in claims 1, 11, 16, and 22 render the claim(s) indefinite because N and M are unbounded limitations. Appropriate correction is required.

3. Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

#### ***Allowable Subject Matter***

4. Claims 1-40 are allowed.
5. The following is a statement of reasons for the indication of allowable subject matter:

Pau (U.S. Patent 6,754,508) teaches an architecture for multiple-band wireless transceiver with quadrature conversion receiver and transmitter circuits includes:

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outgoing data terminals; incoming data terminals; a quadrature signal source; transmitter signal generator circuitry; transmitter signal conversion circuitry; receiver signal generator circuitry; receiver signal conversion circuitry; quadrature modulation circuitry; up conversion circuitry; down conversion circuitry; and quadrature demodulation circuitry. Dual dedicated local oscillators provide the necessary frequency up and down conversion signals for the transmitter and receiver circuits. Each of the transmitter and receiver circuits include multiple, e.g., three, signal paths for providing multiple-band operation. The multiple transmitters share a single modular while the receivers share a single demodulator. Such multiple-band operation is possible while sharing single transmitter and receiver intermediate frequency filters. Any required image rejection or channel selection filters can be fabricated within the same integrated circuit as the remaining transceiver circuitry.

Otaka (U.S. Patent 6,148,181) teaches a radio apparatus comprises a local oscillation signal generator which includes a first local oscillation unit for generating a first local oscillation signal having a frequency to be divided into third and fourth local oscillation signals having a phase difference of 90 degrees and a second local oscillation unit for generating a second local oscillation signal having a frequency to be divided into fifth and sixth local oscillation signals having a phase difference of 90 degrees. The local oscillation signal generator includes an arithmetic unit for adding or subtracting the multiplication result of the third and fifth local oscillation signals and the

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multiplication result of the fourth and sixth local oscillation signals to obtain a local oscillation signal from which an image signal is removed.

As to claim 1, the prior art of record fails to teach, or render obvious, alone or in combination, a method of downconverting a signal and rejecting an image comprising the claimed means and their components, relationships, and functionalities as specifically recited in claim 1.

Claims 2-10 are allowed because they depend on allowable claim 1.

As to claim 11, the prior art of record fails to teach, or render obvious, alone or in combination, a method of upconverting a signal and rejecting an image comprising the claimed means and their components, relationships, and functionalities as specifically recited in claim 11.

Claims 12-15 are allowed because they depend on allowable claim 11.

As to claims 16 and 22, the prior art of record fails to teach, or render obvious, alone or in combination, a method of rejecting an image comprising the claimed means and their components, relationships, and functionalities as specifically recited in claims 16 and 22.

Claims 17-21 and 23-24 are allowed because they depend on allowable claims 16 and 22, respectively.

As to claims 25, 33, 37, and 39, the prior art of record fails to teach, or render obvious, alone or in combination, an image rejection circuit comprising the claimed means and their components, relationships, and functionalities as specifically recited in claims 25, 33, 37, and 39.

Claims 26-32, 34-36, 38, and 40 are allowed because they depend on allowable claims 25, 33, 37, and 39, respectively.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quynh H. Nguyen whose telephone number is 703-305-5451. The examiner can normally be reached on Monday - Thursday from 6:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar, can be reached on (703) 305-4731. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

qhn

Quynh H. Nguyen  
February 3, 2005



AHMAD MATAR  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600